

THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No. : 10/018,609 Confirmation No.: 5092

Appellants : ERNST RYTZ ET AL.

Filed : February 11, 2002

TC/A.U. : 3724

Examiner : MICHALSKI, SEAN M.

Docket No. : 01-732

Customer No. : 34704

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

APPEAL BRIEF

Dear Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed on April 24, 2008.

REAL PARTY IN INTEREST

The real party in interest is Feintool International Holding AG.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant or Appellant's legal representative which will directly affect or be directly affected by or have a bearing on the Board of Appeals decision in the instant appeal.

STATUS OF CLAIMS

Claims 1-4, 7 and 10 are rejected and are on appeal. Claims 5, 6, 8 and 9 have been cancelled without prejudice or devotion of the claimed subject matter to the public. A true copy of the

claims on appeal as of April 24, 2008 is attached hereto in Appendix A.

STATUS OF AMENDMENTS

No amendment was filed subsequent to the Examiner's final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

Appellants' independent claim 1 recites the following:

An apparatus for fine blanking of workpieces from a material (1), comprising:

a press plate (10) having a V-ring (11), which is under pressure from a V-ring cylinder (13) comprising a V-ring piston rod (15) connected to a V-ring piston (12) disposed opposite to and in support of the V-ring (11) of the press plate (10) (Appellants' specification page 5, line 24-page 6, line 7), and

a blanking punch (9) which is guided in the press plate (10) and to which a die plate (17) with counterholder (16) is assigned at a ram (7) (Appellants' specification, page 6, lines 8-16), wherein the ram (7) is supported against at least one compensation cylinder (22) and against at least one main cylinder (19.1, 19.2) (Appellants' specification, page 6, lines 17-21), and wherein the at least one compensation cylinder (22) is hydraulically connected to the V-ring cylinder (13) through a hydraulic connection (25) and is in hydraulic equilibrium with the V-ring cylinder (13), said hydraulic connection (25) also having a connection (26) to an oil tank via a logic valve (27) (Appellants' specification, page 6, line 22-page 7, line 11).

Appellants' dependent claim 2 recites the following:

2. The apparatus as claimed in claim 1, characterized in that four compensation cylinders (22) are provided (Appellants'

specification, page 6, line 22-24).

Appellants' dependent claim 3 recites the following:

3. The apparatus as claimed in claim 1, characterized in that a compensation piston (23) is arranged in the compensation cylinder (22) and is firmly connected to the ram (7) via a piston rod (24) (Appellants' specification, page 6, line 24-page 7, line 1).

Appellants' dependent claim 4 recites the following:

4. The apparatus as claimed in claim 3, characterized in that an effective cross-sectional area of the compensation piston (23) is equal to an effective cross-sectional area of the V-ring piston (12) of the V-ring cylinder (Appellants' specification, page 7, lines 1-4).

Appellants' claims 5 and 6 were cancelled without prejudice or devotion of the claimed subject matter to the public.

Appellants' dependent claim 7 recites the following:

7. The apparatus as claimed in claim 6, characterized in that a piston (20.1, 20.2) of the main cylinder (19.1, 19.2) has an effective cross-sectional area which is greater than that of a compensation piston (23) of the compensation cylinder (22) (Appellants' claim 7 as originally filed).

Appellants' claims 8 and 9 were cancelled without prejudice or devotion of the claimed subject matter to the public.

Appellants' claim 10 recites the following:

10. An apparatus for fine blanking of workpieces from a material, comprising:

a press plate having a V-ring (Appellants' specification page 5, line 24-page 6, line 7);

a blanking punch guided in said press plate (Appellants' specification page 5, line 24-page 6, line 7);

a ram comprising a die plate opposed to said press plate and a counterholder opposed to said blanking punch (Appellants' specification page 5, line 24-page 6, line 7);

a V-ring cylinder connected to said press plate (Appellants' specification page 5, line 24-page 6, line 7);

at least one compensation cylinder connected to said ram, wherein said V-ring cylinder is in hydraulic equilibrium with said compensation cylinder (Appellants' specification, page 6, lines 17-21), and the at least one compensation cylinder is hydraulically connected to the V-ring cylinder through a hydraulic connection (Appellants' specification, page 6, line 22-page 7, line 11), said hydraulic connection also having a connection to an oil tank via a logic valve (Appellants' specification, page 6, line 22-page 7, line 11); and

a main cylinder connected to said ram (Appellants' specification, page 6, lines 8-21).

GROUNDS OF REJECTIONS TO BE REVIEWED ON APPEAL

There are three pending rejection(s) of claims 1-4, 7 and 10, all of which are being appealed, as set forth below.

- (1) Claims 1-3, 7 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S.P.N. 3,570,343 to Wolnosky in view of U.S.P.N. 4,905,556 to Haack et al.;
- (2) Claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over U.S.P.N. 3,570,343 to Wolnosky in view of U.S.P.N. 4,905,556 to Haack et al. as applied to claims 1 and 3 above, and further in view of U.S.P.N. 6,240,818 to Baltschun.

ARGUMENTS

I. U.S.P.N. 3,570,343 TO WOLNOSKY IN VIEW OF U.S.P.N. 4,905,556 TO HAACK ET AL., WHEN FAIRLY READ, FAIL TO DISCLOSE, SUGGEST OR RENDER OBVIOUS THE SUBJECT MATTER OF CLAIMS 1-3, 7 AND 10 UNDER 35 U.S.C. §103(A)

Appellants assert that claims 1-3, 7 and 10 are each individually patentable and not rendered obvious in view of U.S.P.N. 3,570,343 to Wolnosky in view of U.S.P.N. 4,905,556 to Haack et al. Appellants' claims 1 and 10 are independent, and claims 2, 3 and 7 are dependent upon independent claim 1.

A proper analysis under 35 U.S.C. § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success. *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991) (citing *In re Dow Chem. Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988)). Both the suggestion and the reasonable expectation of success "must be founded in the prior art, not in the Appellant's disclosure." *Id.*

The Examiner relies upon Haack to disclose an apparatus for blanking wherein cylinders from the upper and lower die shoes are connected hydraulically. The present application and Haack share a common assignee. Haack teaches a fine blanking apparatus with a punch 32 and a counter-punch 33, and an inside forming punch 34 working together with an expeller 35. With respect to the hydraulics taught therein, Haack at col 3, lines 2-6 teaches the following:

"Piston cylinders 13-16 act independently of one another, and the pressure effective therein can be individually adjusted, as well as individually switched on and off, via valves 50."

Appellants contend the combined teachings of Wolnosky in view of Haack do not teach each and every element of Appellants' claims. First, Appellants draw the Board's attention to the Figure of Wolnosky and Figure 3 of Haack. Upon closer inspection, one of ordinary skill in the art recognizes the cylinders 66 of Wolnosky do not act as compensation cylinders as recited in Appellants' claim 1. The apparatus of Wolnosky utilizes a die plate 24 supported by two main cylinders 66, 68. A quick look may lead one to believe the two main cylinders 66, 68 are alike to the compensation cylinders 19.1, 19.2 recited in Appellants' independent claim 1. However, cylinders 66, 68 of Wolnosky do not act as compensation cylinders, but rather act together with the piercing pads 56. The cylinders 66, 68 transfer forces between the piercing pads 56 and the lower die member 24 and cushion pad 62. Appellants' compensation cylinders do not work together with piercing pads as taught by Wolnosky and thus are structurally different and do not necessarily operate in the same manner as Wolnosky's apparatus.

Secondly, Appellants' claims 1 and 10 recite in part the following, "at least one compensation cylinder is hydraulically connected to the V-ring cylinder through a hydraulic connection, the hydraulic connection also having a connection to an oil tank via a logic valve". Appellants' two main cylinders 19.1 and 19.2 are also connected to one another and via a valve 28 to an oil tank (See Appellants' Figure 1). In contrast, Wolnosky does not teach or suggest using a hydraulic connection to connect the gripping ring 42 having a V-shaped cross section with the cylinders 66, 68. Furthermore, neither Wolnosky nor Haack

individually or combined teach the compensation cylinder identified by the Examiner is connected to the V-ring cylinder by a hydraulic connection that is also connected to an oil tank via a logic valve. Wolnosky teaches and suggests using two separate logic valves and tanks as illustrated in the Figure and taught at col. 2, line 8-col. 3, line 58. Likewise, Haack teaches and suggests using two separate logic valves to deliver pressurized oil to the hydraulic units as illustrated in Figure 3 and taught at col. 2, line 61-col. 3, line 6. Haack further teaches the benefits and advantages in using this hydraulic power set-up based upon the graph of Figure 9 contained therein. Figure 9 illustrates the plotted curves representing the harmonized movements of the ram and transfer press and of the individual pistons, and further teaches the advantageous pressing and cutting forces are achieved based upon these harmonized movements.

The Examiner responded in the Final Office action mailed on October 24, 2007 by relying upon the KSR and Dystar decisions to suggest motivation **need not be found in the references sought to be combined**, but may be found in any number of sources, **including common knowledge**, the prior art as a whole **or the nature of the problem itself** (emphasis added by the Examiner, Final Office action mailed October 24, 2007). However, Neither KSR nor Dystar stand for the proposition that an Examiner can derive the basis for motivation using Appellants' disclosure and claims. By making this statement, the Examiner acknowledged neither Wolnosky nor Haack disclose the teaching, suggestion or requisite motivation to support a finding of obviousness. At the same time, the Examiner has also not identified a single source of common knowledge or identified the nature of the problem (other than the elimination of a tank for reducing cost and

complexity, Final Office action mailed October 24, 2007, page 3) and explained how the combined teachings of the cited references overcome the problem. To Appellants' knowledge the Examiner has solely relied upon Appellants' disclosure and claims 1 and 10, and such reasoning is not legally valid. Appellants' claims 1 and 10 cannot be rejected under 35 U.S.C. §103 unless the combined teachings of the cited prior art references teach, suggest or provide the requisite motivation to teach each and every element of the claim. Wolnosky in view of Haack does not do this.

Notwithstanding the Examiner's counterarguments, Appellants contend one of ordinary skill in the art still would not combine the references and consolidate parts to eliminate a logic valve as neither Wolnosky nor Haack provide the requisite motivation to do so. The only teaching or suggestion to utilize a hydraulic connection with a single logic valve and an oil tank is Appellants' claims. No other source provides such teachings other than Appellants' claims. In addition to, or in the alternative, if one of ordinary skill in the art were to combine Wolnosky in view of Haack and utilize only a single logic valve, the proposed blanking punch would be rendered inoperable as there is insufficient disclosure to teach connecting hydraulically the opposed die members using only a single tank and a single logic valve. Moreover, Appellants contend Haack does not teach or suggest eliminating a logic valve and consolidating the hydraulics as Haack teaches the advantages achieved, that is, the harmonized movements of the ram and individual pistons, using the hydraulics taught therein. As a result, the proposed blanking punch cannot operate properly as one of ordinary skill in the art does not have enough information, without the benefit of Appellants' claims, to

assemble the blanking punch recited in Appellants' claims 1 and 10.

Appellants' claim 2 recites four compensation cylinders are provided. The past Examiners have all characterized the cylinders 66/68 of Wolnosky as being "compensation cylinders" as recited in Appellants' claim 2. However, the cylinders 66, 68 of Wolnosky are not actually compensation cylinders as evidenced by their location and orientation within the Wolnosky apparatus. The Wolnosky cylinders 66/68 are part of a hydraulic cushion 30 because the cylinders 66/68 are arranged between the die member 24 and the cushion pad 62 and directly between the gripping ring 42 and main cylinder. The die member 24 is the lower die member and the gripping ring 42 having a V-shaped cross-section is provided on this lower die member as described at column 2, lines 27-35 of Wolnosky. As Haack does not include a V-ring cylinder in his apparatus, Haack cannot provide a basis for teaching the compensation cylinders of Appellants' claim 2. Wolnosky in view of Haack fails to teach or suggest the subject matter of claim 2, and this claim is therefore allowable based upon its own merits and also based upon dependency from Appellants' claim 1.

Appellants' claim 3 recites a compensation piston is arranged in the compensation cylinder and is firmly connected to the ram via a piston rod. Appellants reiterate their position that Wolnosky does not actually teach the use of a compensation cylinder in their apparatus as discussed above. Wolnosky in view of Haack fails to teach or suggest the subject matter of Appellants' claim 3, and this claim is therefore allowable based upon its own merits and also based upon dependency from Appellants' claim 1.

Appellants' claim 7 recites a piston of the main cylinder has an effective cross-sectional area which greater than that of a compensation piston of the compensation cylinder. Again, Appellants reiterate their position that Wolnosky does not actually teach the use of a compensation cylinder in their apparatus as discussed above. Wolnosky in view of Haack fails to teach or suggest the subject matter of Appellants' claim 7, and this claim is therefore allowable based upon its own merits and also based upon dependency from Appellants' claim 1.

For at least these reasons, Appellants contend claims 1-3, 7 and 10 are patentable over the combined teachings of Wolnosky taken in view of Haack.

In light of the foregoing, Appellants respectfully request the examiner withdraw the rejection under 35 U.S.C. §103(a) and find that claims 1-3, 7 and 10 are allowable.

II. U.S.P.N. 3,570,343 TO WOLNOSKY IN VIEW OF U.S.P.N. 4,905,556 TO HAACK ET AL. AS APPLIED TO CLAIMS 1 AND 3 ABOVE, AND FURTHER IN VIEW U.S.P.N. 6,240,818 TO BALTSCHUN, WHEN FAIRLY READ, FAIL TO TEACH, DISCLOSE, SUGGEST OR RENDER OBVIOUS THE SUBJECT MATTER OF CLAIM 4 UNDER 35 U.S.C. §103(A)

Appellants assert that dependent claim 4 is patentable and not rendered obvious in view of U.S.P.N. 3,570,343 to Wolnosky in view of U.S.P.N. 4,905,556 to Haack et al, as applied to claims 1 and 3 above, and further in view of U.S.P.N. 6,240,818 to Baltschun. Appellants' claim 4 is dependent upon independent claim 1.

A proper analysis under 35 U.S.C. § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success. *In re Vaeck*, 947 F.2d 488, 493 (Fed. Cir. 1991) (citing *In re Dow Chem. Co.*, 837 F.2d 469, 473 (Fed. Cir. 1988)). Both the suggestion and the reasonable expectation of success "must be founded in the prior art, not in the Appellant's disclosure." *Id.*

Appellants reiterate their contention that neither Wolnosky nor Haack teach or suggest all of the elements of Appellants' independent claim 1 for the reasons stated above.

Appellants' claim 4 recites the effective cross-sectional area of the compensation piston is equal to an effective cross-

sectional area of the V-ring piston of the V-ring cylinder. The Examiner relies upon Baltschun to teach the importance of equal piston areas of opposed cylinders in a blanking device to achieve an equilibrium state. Appellants note the Baltschun does not teach or suggest (a) the use of compensation cylinders or (b) a hydraulic connection between the cylinders taught therein and a V-ring cylinder. Notwithstanding the remainder of Baltschun's teachings, Baltschun still does not change the fact that Wolnosky does not actually teach the use of a compensation cylinder in their apparatus as discussed above.

Appellants contend Baltschun does not cure the deficiencies present in either Wolnosky or Haack. The Examiner relied upon Baltschun to teach the importance of equal piston areas of opposed cylinders in a blanking device in order to achieve an equilibrium state (Final Office action mailed on April 3, 2007, page 4, last paragraph). However, Baltschun does not teach, suggest or provide the requisite motivation to adapt its disclosure and teach the following, "at least one compensation cylinder is hydraulically connected to the V-ring cylinder through a hydraulic connection, the hydraulic connection also having a connection to an oil tank via a logic valve". Baltschun cannot be relied upon to cure deficiencies present in the combination of Wolnosky in view of Haack. Furthermore, the combination of Wolnosky in view of Haack and further in view of Baltschun fails to teach, suggest or provide the requisite motivation to adapt their combined teachings to achieve all of the claim elements recited in Appellants' dependent claim 4.

For at least these reasons, Appellants contend dependent claim 4 is patentable over the combined teachings of Wolnosky taken in view of Haack and further in view of Baltschun.

In light of the foregoing, Appellants respectfully request the examiner withdraw the rejection under 35 U.S.C. §103(a) and find that dependent claim 4 is allowable.

CONCLUSION

For the reasons set forth above, the honorable Board of Appeals is hereby requested to reverse the Examiner's rejection of claims 1-4, 7 and 10 based on all of the cited references discussed above.

CLAIMS APPENDIX

Attached hereto is a Claims Appendix A containing all claims 1-4, 7 and 10 in the application and which form the basis for this appeal.

EVIDENCE APPENDIX

None.

SPECIAL PROCEEDINGS APPENDIX

None.

APPEAL BRIEF FEE

Please charge Deposit Account No. 02-0184 in the amount of \$510.00 to cover the Appeal Brief fee.

If any other fees are required in connection with this case, it is respectfully requested that they also be charged to Deposit Account No. 02-0184.

Respectfully submitted,

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IN TRIPPLICATE

Appendix A
Claims Appendix

1. An apparatus for fine blanking of workpieces from a material (1), comprising:

a press plate (10) having a V-ring (11), which is under pressure from a V-ring cylinder (13) comprising a V-ring piston rod (15) connected to a V-ring piston (12) disposed opposite to and in support of the V-ring (11) of the press plate (10), and

a blanking punch (9) which is guided in the press plate (10) and to which a die plate (17) with counterholder (16) is assigned at a ram (7), wherein the ram (7) is supported against at least one compensation cylinder (22) and against at least one main cylinder (19.1, 19.2), and wherein the at least one compensation cylinder (22) is hydraulically connected to the V-ring cylinder (13) through a hydraulic connection (25) and is in hydraulic equilibrium with the V-ring cylinder (13), said hydraulic connection (25) also having a connection (26) to an oil tank via a logic valve (27).

2. The apparatus as claimed in claim 1, characterized in that four compensation cylinders (22) are provided.

3. The apparatus as claimed in claim 1, characterized in that a compensation piston (23) is arranged in the compensation cylinder (22) and is firmly connected to the ram (7) via a piston rod (24).

4. The apparatus as claimed in claim 3, characterized in that an effective cross-sectional area of the compensation piston (23) is equal to an effective cross-sectional area of the V-ring piston (12) of the V-ring cylinder.

5. (Cancelled)

6. (Cancelled)

7. The apparatus as claimed in claim 6, characterized in that a piston (20.1, 20.2) of the main cylinder (19.1, 19.2) has an effective cross-sectional area which is greater than that of a compensation piston (23) of the compensation cylinder (22).

8. (Cancelled)

9. (Cancelled)

10. An apparatus for fine blanking of workpieces from a material, comprising:

a press plate having a V-ring;
a blanking punch guided in said press plate;
a ram comprising a die plate opposed to said press plate and a counterholder opposed to said blanking punch;
a V-ring cylinder connected to said press plate;
at least one compensation cylinder connected to said ram, wherein said V-ring cylinder is in hydraulic equilibrium with said compensation cylinder, and the at least one compensation cylinder is hydraulically connected to the V-ring cylinder through a hydraulic connection, said hydraulic connection also having a connection to an oil tank via a logic valve; and
a main cylinder connected to said ram.

Appendix B

Evidence Appendix

None.

Appendix C
Related Proceedings Appendix

None.